

Figure 1. Composition of multiple views of a rotated camera into a panoramic image. The center "X" mark indicates the location of camera optical and rotating center







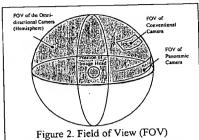


Figure 2. Field of View (FOV)
Comparison of Conventional Cameras,
Panoramic Cameras, and GTI's
Omnidirectional Camera.





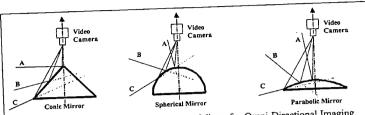


Figure 3. Examples of Reflective Convex Mirror for Omni-Directional Imaging. Notice that these convex mirrors do not satisfy the single viewpoint constraint (SVC) condition: The (extension of) reflected rays do not meet at single viewpoint, i.e., the virtual viewpoint varies with rays' impinging location on the mirror.







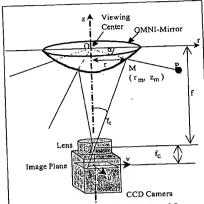
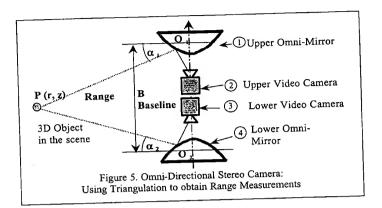


Figure 4. Acquire Omni-Directional Image from the OMNI-Mirror: A video camera placed at location C can "see" objects in an entire hemisphere FOV, from a single virtual viewpoint at mirror's focal center O.











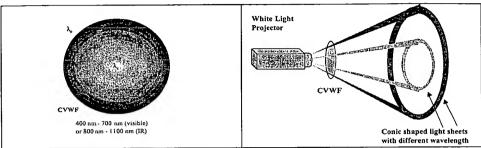


Figure 6. Circular Variable Wavelength Filter (CVWF)





